

REMARKS

Claims 1-5, 7-8, 10-11, 13-19, and 23-26 are currently pending. Claims 4 and 5 are original. Claims 1-3, 7-8, 10-11, 13-19 and 23-26 were previously presented. Claims 1 and 13 are independent. No new matter is added.

Claims 1-5, 7, 10, 11, 13-18 and 25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nakai et al. (U.S. Patent No. 4,831,512, "Nakai") in view of Hershey (U.S. Patent No. 5,544,077, "Hershey").

Claims 8 and 19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nakai in view of Hershey and further in view of Baker et al. (U.S. Patent No. 6,073,089, "Baker").

Applicant notes with appreciation that claims 23, 24 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to rejection of Claim 1 under §103

Applicant hereby traverses the rejection of claim 1 under §103 and respectfully requests reconsideration thereof in view of the remarks set forth below.

The Office Action dated January 13, 2006 (See page 3, lines 8-11) states that "Nakai disclose[s]...generating a modified message by providing a time indicator for at least one process of the plurality of processes in the domain..." (see column 2 lines 63-66 and column 5 lines 19-23). Applicant points out that the claim 1 recites "...generating a modified active message by providing an active time indicator associated with the active message for each of the plurality of active processes..." Nakai discloses a plurality of processors (see column 5, line 16) and processes ("programs", see column 5, line 17). Therefore, Nakai would have to provide time stamps for each of the plurality of processors or processes to teach or suggest the limitation in claim 1 noted above. However, Nakai discloses adding only one time stamp ("TS1", see column 5, lines 24-36) for each message. Nakai teaches eliminating message redundancy based on the single time stamp in each

message. Nakai does not teach or suggest "...providing an active time indicator...for each of the plurality of active processes..." Furthermore, nowhere in Hershey is there any teaching or suggestion for modifying an active message by providing an active time indicator. Therefore, Applicant submits that Nakai and Hershey, alone or in combination, fail to teach or suggest the elements of the claimed invention. To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) "All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)."

No Motivation to Combine

Even assuming arguendo that the two references do teach or suggest in combination all of the elements recited by Claim 1, such combination is inappropriate without identifying a motivation for combination.

To make such a rejection, an examiner must provide objective evidence of a suggestion or motivation in the art to combine the references. MPEP § 2142. As further recited in MPEP § 2145, "there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine reference teachings." See also, In re Fitch 972 F.2d 1260, 1265 (Fed.Cir.1992) ("the examiner can satisfy the burden of showing obviousness of the combination 'only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references'"). Moreover, the Board of Patent Appeals has noted on a number of occasions, including in Ex parte Levengood, 28 USPQ2d 1300, 1302 (1992), for evidence of a motivation to combine references to be sufficient to form the basis of an obviousness rejection, the evidence would have to "impel one skilled in the art to do what the patent applicant has done." As the Board and the courts have repeatedly held, such evidence is essential to avoid the impermissible use of hindsight, using "that which only the inventor taught []

against the teacher.” See *In re Dembiczak*, 175 F.3d 994 (quoting *W.L. Gore & Assoc., Inc v. Garlock, Inc.* 721 F.2d 1540, 1553).

To justify the combination of the references, the Office action (page 4, lines 4-7) states that “A person of ordinary skill in the art at the time the invention was made would have been motivated [to combine the teachings of Nakai and Hershey] because Nakai discloses detecting errors or fault, and having a standby, as per the teachings of Hershey, allows for continued processing in the event of failures of the primary or active.” Applicant respectfully disagrees.

Hershey merely teaches an already well known concept of using a standby processor to monitor heart beat signals generated by a primary processor and uses it to determine if the primary is in fact failing. In the event that a heart beat signal is not received or is delayed, the standby processor concludes that the primary processor is failing and undertakes a switchover to perform the functions of the primary. Meanwhile, Nakai discloses the concept of eliminating redundant messages by assigning a single time stamp to each message and examining the time stamp of messages to determine if it is a redundant message based on its similarity to the time stamp of another message. Nakai also teaches a well known concept of “cyclic message error check” based on these time stamps received by the processors and other time interval information included in the message. The Office Action (see page 4, lines 4-7) draws a parallel between the concepts of determining if the primary is failing using the heartbeat signal according to Hershey, and calculating a cyclic message error check according to Nakai. In reality, while Nakai discusses removing redundancy and monitoring errors within messages, Hershey discloses monitoring a processor to determine processor failure. These references teach two very different concepts and combining them would be improper and, more so, would not be obvious to one skilled in the art.

Furthermore, Nakai fails to discuss any type of stand-by processor, or any type of switching to an alternate processor. Therefore, there is no teaching and suggestion for “...generating a stand-by message...” as recited in claim 1. For example, nothing in Nakai talks about a stand-by processor and additional messages (stand-by messages) generated by the stand-by processor. In fact, Nakai teaches away from additional or redundant messages by stating “it is another object of

the present invention to provide a system which can readily eliminate redundant or superfluous messages.” (See column 1, lines 47-49). Nakai, further states “if [the message] is determined to be a redundant message, the process is terminated...” (see column 5, lines 66-68 and column 6, lines 1-3). Therefore, a person of ordinary skill in the art in search of systems and methods of “detecting errors or faults...and...continued processing in the event of failures...”, would not be motivated to combine the teachings of Nakai with any other reference having redundant systems and stand-by processors such as Hershey.

Moreover, as stated in the MPEP §2143.01, “the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” Citing *In re Mills*, 916 F.2d 680, 16 USPQ 1430 (Fed. Cir. 1990).

Hershey at least fails to teach or suggest “...generating a modified active message by providing an active time indicator...” as recited in claim 1. There is nothing in Hershey to impel one of ordinary skill in the art to combine the teachings of Hershey with Nakai for the purposes of “providing an active time indicator”.

Hershey also fails to discuss or suggest using a generated statistical characteristic for a modified active message to interchange a stand-by processor with an active processor. In fact, Hershey merely discloses “...monitor[ing] a heartbeat signal from the primary to periodically check the health of the primary.” (column 2, lines 37-38). “If the standby senses that the primary is failing, the standby will switchover to perform the functions of the primary...” (see column 2, lines 38-40). There is nothing in Hershey to impel one of ordinary skill in the art to combine the teachings of Hershey with Nakai for the purposes of “generating a statistical characteristic”. Hershey hasn’t explicitly or implicitly expressed any need or desire for a more sophisticated method for classifying failures as being based on a generated statistical characteristic.

Therefore, there is nothing in either of the publications that would impel one of skill in the art to make the proposed combination. As such, Applicants must assume that the motivation asserted in the action was derived based on impermissible hindsight. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the

prior art and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). The extension of Hershey and its combination with Nakai is clearly based on applicant's disclosure.

Response to Rejection of Claim 13 under §103

Applicant hereby traverses the rejection of claim 13 under §103 and respectfully requests reconsideration thereof in view of the remarks set forth below.

Claim 13 recites "...an active time-stamp mechanism...for providing an active time indicator for each of the at least one active processor for use in generation of the modified active message..." As noted earlier, neither Nakai nor Hershey teach or suggest providing an active time indicator for each of the at least one active processor. Therefore, Nakai and Hershey, alone or in combination do not teach or suggest an active time stamp mechanism as recited in independent claim 13.

Furthermore, claim 13 recites "a redundancy manager...interchanging, based on a statistical characteristic for a modified message...the active processor domain with the stand-by processor domain..." As noted earlier, Nakai does not teach any stand-by processor and also teaches away from redundant messages, Consequently, Nakai does not teach or suggest any redundancy manager capable of interchanging the active processor domain with the stand-by processor domain. Additionally, Hershey does not teach or suggest a redundancy manager and therefore fails to fill the gap. Hershey merely discloses "a standby [that] monitors a heartbeat signal from the primary to periodically check the health of the primary." (See column 2, lines 37-38).

The combination of Baker with the above references fails to teach all of the elements of independent claims 1 and 13.

CONCLUSION

At least for these reasons, neither Nakai or Hershey or Baker, taken either alone or in combination, teach or suggest the features recited in claims 1 and 13. Accordingly, these references do not establish a prima facie case of obviousness with respect to claims 1 and 13. Therefore, claims 1 and 13 are non-obvious with respect to the art of record and should be allowed. Claims 2-5, 7-8, 10-11, 14-19, and 25 depend, directly or indirectly, from claims 1 and 13 and are also patentable for at least for the same reasons that claims 1 and 13 are patentable. In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Applicant believes no additional fee is due with this response other than a three-month extension of time. However, if an additional fee is due, please charge our Deposit Account No. 18-1945, under Order No. CDPC-P01-004 from which the undersigned is authorized to draw.

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Respectfully submitted,

By 

Edward J. Kelly

Registration No.: 38,936
ROPES & GRAY LLP
One International Place
Boston, Massachusetts 02110-2624
(617) 951-7000
(617) 951-7050 (Fax)
Attorneys/Agents For Applicant